

7/9

STATEMENT OF BASIS

APPLICANT: Earle M. Jorgensen Company
P.O. Box 24026
Seattle, Washington 98124

LOCATION: 8531 East Marginal Way South
Seattle, Washington

APPLICATION NO: WA-003078-3

ACTIVITY: Steel manufacturing

RECEIVING WATER: Duwamish River

CLASS: B

PUBLIC PARTICIPATION:

A public notice describing the proposed waste discharge permit will be published in a newspaper of general circulation in the locality in which the discharge is to occur.

BACKGROUND:

The Earle M. Jorgensen Company manufactures forged steel ingots, forged billets and custom machined parts at a plant on East Marginal Way in Seattle. Jorgensen purchased the plant in 1965 from Bethlehem Steel and Issacson Steel. Many improvements have been made to the plant since its purchase including installation of air pollution control equipment and replacement of steam-powered equipment with new machinery. Jorgensen uses only number one steel scrap as a raw material for manufacturing. Number one scrap does not contain galvanized steel. Jorgensen has sampled its discharges and stormwater and has not experienced any problems to date with chromium, lead or zinc contamination. Wastewater sources in the plant are the melt furnace cooling system, quench tanks, the vacuum degasser and stormwater runoff from a number of areas on-site.

WASTESOURCES AND TREATMENT:

Jorgensen discharges water to the Duwamish River from three outfall lines as follows:

Outfall 001 (12" steel) - vacuum degasser; melt furnace cooling (non-contact); runoff from slagpot and scrap steel storage areas (stormwater).

Outfall 002 (12" aluminum) - rail car weigh scale sump (stormwater); roof drains (stormwater); quench tanks.

Outfall 003 (18" concrete) - employee parking lot (stormwater).

USEPA RCRA



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WASTESOURCES AND TREATMENT (Continued):

The vacuum degasser is used to extract gases, mainly hydrogen, from hot steel before it is formed into ingots. A boiler converts city water into steam at an average rate of 12,000 pounds per hour. The steam is used to create a vacuum above the hot steel in order to pull the unwanted gases from the metal. The vacuum degasser uses two direct contact condensers to cool the steam used in the degassing process. The steam condensate from the condensers totals 750 gpm. The condensate flow enters the Duwamish River via a 12 inch steel line close to the south property line (Outfall 001). Solids, mainly iron oxides, settle in the condensate line immediately downstream from the condensers and are cleaned out on a weekly basis. The solids are currently combined with baghouse dust and disposed of as dangerous wastes to Arlington, Oregon.

Both the melt furnaces and the car-bottom forging furnaces are located in the main building. The melt furnaces have a recirculating cooling water system. If this system fails for any reason, city water is used for once-through, non-contact cooling until the failure can be repaired. This occasional discharge of non-contact cooling water enters the Duwamish River via the 12 inch line (Outfall 001). The car-bottom forging furnaces do not have cooling systems and do not produce any process wastewater. Stormwater runoff from the slag pot and scrap steel storage area enters the river via a catch basin tributary to the 12" steel line (Outfall 001).

Jorgensen uses several small quench tanks on a daily basis. For cooling very long steel sections Jorgensen sets up a large quench tank inside the main building. The water discharged from these tanks enters the Duwamish River via a 12 inch aluminum line (Outfall 002). A sump under the rail car weigh scale is also tributary to the river via the 12 inch aluminum line (Outfall 002). No washing of the scrap is done at the weigh scale, consequently the sump collects stormwater only.

Outfall 003 collects only stormwater runoff from the employee parking area.

Jorgensen uses an Argon-Oxygen Decarburization (AOD) process to remove impurities during production of certain types of steel. The AOD process does not produce any wastewater sources.

Jorgensen uses a dry air pollution control system. Baghouse dust is currently handled as dangerous waste and shipped to Arlington, Oregon. Mill scale is stored in an open area near the baghouse. The mill scale and slag pots are hauled to Northwest Slag Products in Kent.

Acid etching is used as a method of detecting flaws or inclusions in metal to be used in the production of aircraft quality steel. In the past, the waste etching acid was discharged through limestone prior to entering the ground. The limestone neutralized the acid before it reached the groundwater beneath the pit. The pit has not been used since August 1982. Jorgensen has sealed the bottom of the pit (May 1984) and will contain and dispose of any future waste acid in accordance with Washington State Department of Ecology regulations.

RECOMMENDATIONS:

OUTFALL 001:

The effluent limitations for vacuum degasser effluent in the proposed permit are in accordance with the Code of Federal Regulations (40 CFR), Part 420, Iron and Steel Manufacturing - Point Source Category. The vacuum degassing subcategory, Subpart E, addresses the vacuum degassing effluent. The limitations for total suspended solids and pH are listed in Subpart E, Section 420.52 under best practicable control technology currently available (BPT). The limitations for lead and zinc are listed in Subpart E, Section 420.53 under best available technology economically achievable (BAT). Both the BPT and BAT limitations are currently in effect.

These regulations were applied to Jorgensen's vacuum degasser effluent based on maximum steel production of 443,000 lbs per day. The limitations, as they appear in the proposed permit are as follows:

<u>Parameter</u>	<u>Daily Maximum</u>	<u>Average of daily values for 30 days</u>
TSS (lb/day)	6.9	2.3
Lead (lb/day)	.042	.014
Zinc (lb/day)	.062	.021
pH	Within the range of 6.0 - 9.0	

The vacuum degasser is tributary to Outfall 001. Water samples to test for compliance with the above conditions will be taken upstream of the confluence with any of the other wastewater sources tributary to Outfall 001. Melt furnace, non-contact cooling water, also tributary to Outfall 001, will be required to have a pH in the range of 6.0 to 9.0 under the proposed permit. Flows will be limited to 80,000 gpd daily average and 100,000 gpd daily maximum on an emergency basis only. Water samples will be taken monthly regardless of discharge activity from the cooling system.

The storage area stormwater sump will be sampled for pH, oil and grease, TSS, lead and zinc. The pH limit is within the range of 6.0 to 9.0. The lead and zinc limitations are based on EPA Water Quality Criteria for freshwater aquatic life (FR Vol. 45, No. 231, Friday, November 28, 1980). A hardness level of 50 mg/l was used to calculate the lead and zinc limitations as rainwater (stormwater runoff) would be below this level. In order to develop data on the stormwater sump discharge and the quench tank discharge mentioned below, special condition S5.E will require samples be taken and analysed for total oil and grease. If review of the data indicates a violation of permit conditions, the permit may be modified to require further sampling and/or correction of the out of limit discharge(s).

Outfall 002

The rail car weigh scale sump (stormwater), roof drains (stormwater), and the quench tanks are tributary to Outfall 002. Quench tank cooling water will be discharged to the river under the proposed permit. Water samples will be taken periodically and analysed to assure compliance with state water quality standards. The weigh scale sump and roof drains will also be discharged via the outfall, but no monitoring of these stormwater sources will be required in the proposed permit.

Outfall 003

The employee parking area discharges via Outfall 003. As all flow is uncontaminated stormwater, no monitoring will be required by the permit.

If during the first year of monitoring the effluent limitations in the NPDES permit are not consistently met, an administrative order will be issued to Earle M. Jorgensen Company under State of Washington Water Pollution Control Laws, Chapter 90.48.120 RCW. The order will require Jorgensen to follow a schedule of compliance to bring the out of limit discharge or discharges into compliance with the effluent limitations given in the NPDES permit.

BGS:ph
5-84 dt

In addition to the items of equipment detailed in the statement of basis, you should know that Jorgensen is currently installing, and will shortly be operating, a hot-topping device, which will allow the production of very large ingots (in excess of 150 tons).

This system will utilize non-contact cooling water from the melt furnace cooling system, and will return the water to the system for cooling. It is not anticipated that the use of this device will in and of itself result in any additional discharge of water to the Duwamish river.

Since the system is currently being installed, we do not at the present time have any more precise information on the exact configuration of this system, but will be happy to supply it when it is obtained from the manufacturer.

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NOTE:

In addition to the items of equipment detailed in the statement of basis, you should know that Jorgensen is currently installing, and will shortly be operating, a hot-topping device, which will allow the production of very large ingots (in excess of 150 tons).

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FORM 1 GENERAL	 EPA U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION Consolidated Permits Program <i>(Read the "General Instructions" before starting.)</i>	EPA I.D. NUMBER <div style="border: 1px solid black; padding: 2px; font-family: monospace; font-size: 1.2em;"> F W A D 0 0 0 6 0 2 8 1 3 </div>
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III. FACILITY NAME V. FACILITY MAILING ADDRESS VI. FACILITY LOCATION	<div style="background-color: #cccccc; padding: 20px; font-size: 1.5em; font-weight: bold;"> PLEASE PLACE LABEL IN THIS SPACE </div>
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GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parentheses following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK 'X'			SPECIFIC QUESTIONS	MARK 'X'		
	YES	NO	FORM ATTACHED		YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility (either existing or proposed) include a conventional animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)	X			D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)		X		F. Do you or will you have at this facility industrial or municipal waste in the lowermost stratum containing, or capable of forming, a layer of the well bore, underground, or of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as refining of sulfur by the Frasch process, leaching of minerals, in situ combustion of oil, or recovery of geothermal energy? (FORM 5)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP EARLE M JORGENSEN CO

IV. FACILITY CONTACT

A. NAME & TITLE (Last, first, & title)	B. PHONE (area code & no.)
2 LAVILLETTE, JOHN PLANT IND. ENGR.	206 762 1100

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX	B. CITY OR TOWN
3 PO BOX 24026	SEATTLE
C. STATE & ZIP CODE	
WA 98124	

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER	B. COUNTY NAME
5 8531 E. MARGINAL WAY SOUTH	KING
C. CITY OR TOWN	D. STATE & ZIP CODE
6 SEATTLE	WA 98108
E. COUNTY CODE (if known)	

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS
Consolidated Permits Program

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

OFFICIAL USE ONLY (effluent guidelines sub-categories)

WAD 000602813

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding — Complete one set of tables for each outfall — Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
	NONE		

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

A. Is any pollutant listed in Item V-C a substance or a component of a substance which you do or expect that you will over the next 5 years use or manufacture as an intermediate or final product or byproduct?

☒ YES (list such pollutants below)

☐ NO (go to Item VI-B)

MURATIC (30% Hydrochloric) acid & water
Sulfuric acid
NITRIC acid

CHROMIUM
LEAD
CADMIUM

ALL of the substances listed in V-C pages 1-9 will continue to be produced at same level.

B. Are your operations such that your raw materials, processes, or products can reasonably be expected to vary so that your discharges of pollutants may during the next 5 years exceed two times the maximum values reported in Item V?

☐ YES (complete Item VI-C below)

☒ NO (go to Section VII)

C. If you answered "Yes" to Item VI-B, explain below and describe in detail the sources and expected levels of such pollutants which you anticipate will be discharged from each outfall over the next 5 years, to the best of your ability at this time. Continue on additional sheets if you need more space.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (copy from Item 1 of Form 1)

WAD000602813

Form Approved OMB No. 158 R0173

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL I.O.

1

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)				
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	e. LONG TERM AVERAGE VALUE		f. NO. OF ANALYSES	
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
a. Biochemical Oxygen Demand (BOD)	1.3	0.54						mg/liter	pounds per day	1.0			
b. Chemical Oxygen Demand (COD)	22.0	1.58						"	"	5.0			
c. Total Organic Carbon (TOC)	A	A								A			
d. Total Suspended Solids (TSS)	38.0 23.5	13.85 26.48						"	"	50			
e. Ammonia (as N)	0.14	0.06						"	"	0.1			
f. Flow	VALUE 0.05		VALUE		VALUE		Daily	MGD		VALUE 0.05			
g. Temperature (winter)	VALUE 70°F (est)		VALUE		VALUE					°C	VALUE 40°F		
h. Temperature (summer)	VALUE 86°F (est)		VALUE		VALUE					°C	VALUE 58°F		
i. pH	MINIMUM 6.9	MAXIMUM 7.5	MINIMUM	MAXIMUM				STANDARD UNITS					

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	e. LONG TERM AVERAGE VALUE		f. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X	A	A								A		
b. Chlorine, Total Residual	X		5.0	2.08								4.05		
c. Color	X		15									N.L.		1
d. Fecal Coliform		X	A									A		1
e. Fluoride (16984-48-8)	X		1.0											
f. Nitrate-Nitrite (as N)		X	A									A		

EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
WAD060602813	1

CONTINUED FROM PAGE 3 OF FORM 2-C

Form Approved OMB No. 158-R0173

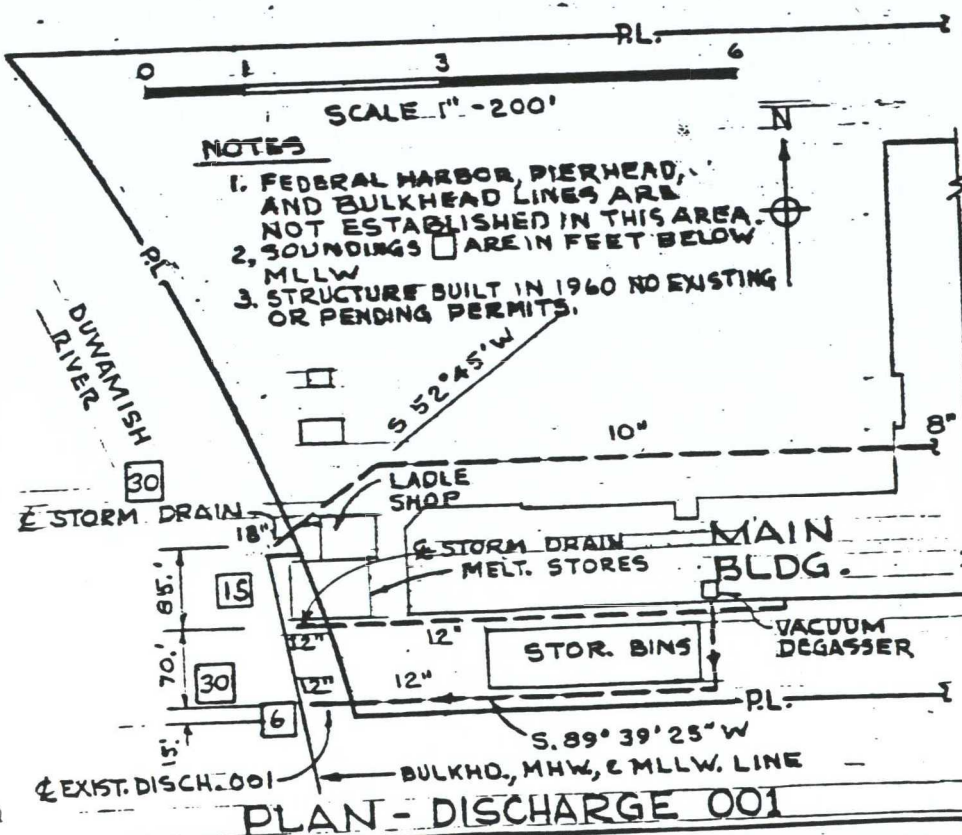
PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, non-process wastewater outfalls, and non-required GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe to be absent. If you mark either columns 2-a or 2-b for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table (*all seven pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	2-a GC/MS FRACTIONS REQUIRED	2-b GC/MS FRACTIONS PRESENT	2-c GC/MS FRACTIONS ABSENT	3. MAXIMUM DAILY VALUE		3. MAXIMUM 30 DAY VALUE (if available)		3. LONG TERM AVG. VALUE (if available)		4. NO. OF ANALYSES	4. CONCENTRATION	4. MASS	5. LONG TERM AVERAGE VALUE		5. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X			A											
2M. Arsenic, Total (7440-38-2)	X			A											
3M. Beryllium, Total (7440-41-7)			X	A											
4M. Cadmium, Total (7440-43-9)	X			<.002											
5M. Chromium, Total (7440-47-3)	X			.05	.021						mg/l	lbs/day			
6M. Copper, Total (7550-50-8)	X			.70	.29						"	"			
7M. Lead, Total (7439-97-8)	X			.90	.38						"	"			
8M. Mercury, Total (7439-97-6)			X	A											
9M. Nickel, Total (7440-02-0)	X			.02	.009						"	"			
10M. Selenium, Total (7782-49-2)			X	A											
11M. Silver, Total (7440-22-4)			X	A											
12M. Thallium, Total (7440-28-0)			X	A											
13M. Zinc, Total (7440-66-6)	X			.80	.33						"	"			
14M. Cyanide, Total (57-12-5)			X	A											
15M. Phenols, Total			X	A											
DIOXIN															
2,3,7,8 Tetra chlorodibenzo P Dioxin (1764-01-6)				DESCRIBE RESULTS											

NOV 1 1971



TRACED FROM H.M. GOUSHA MAP CO. 1965



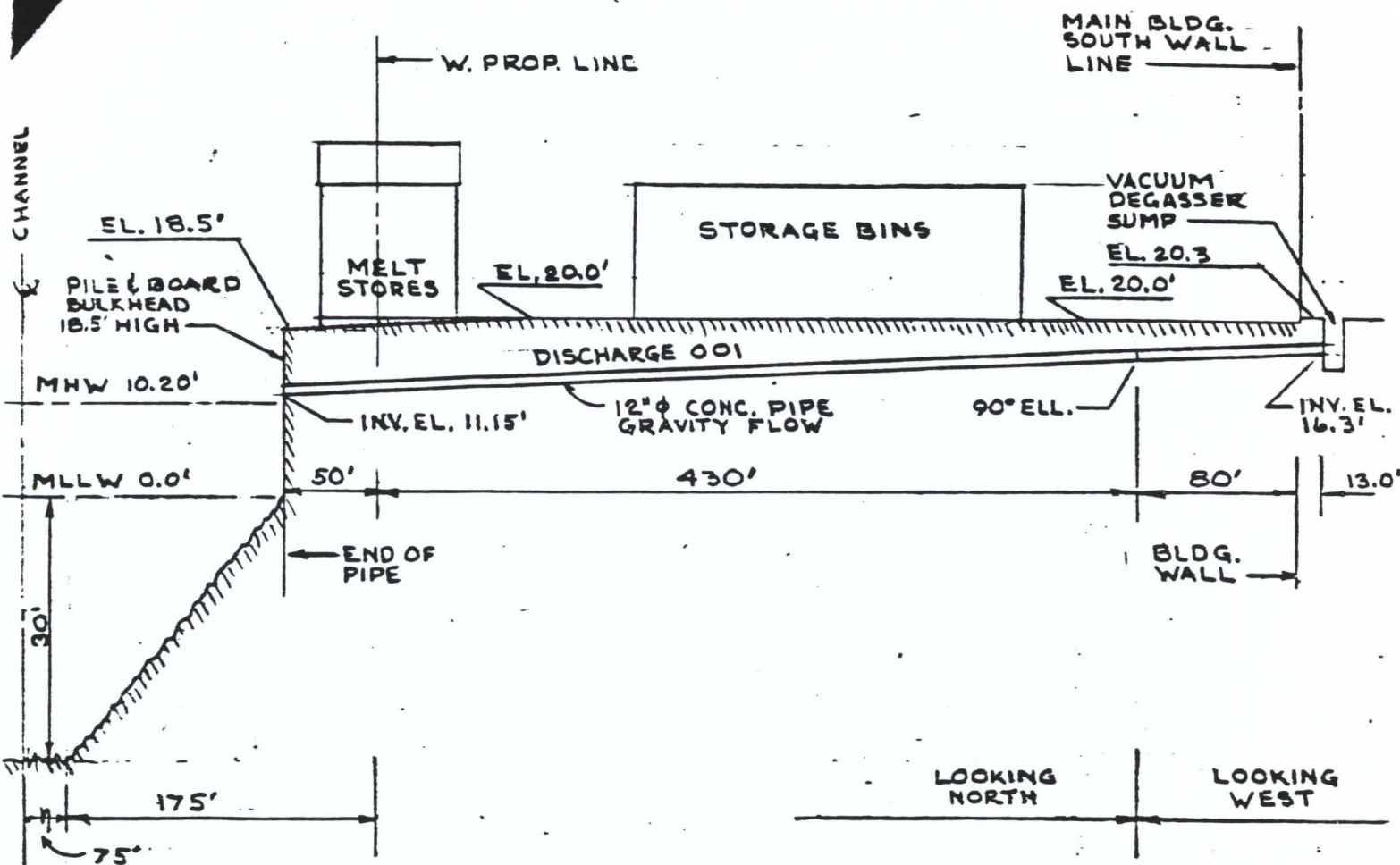
EXISTING DISCHARGE
NO. 001

INTO: DUWAMISH RIVER
AT : SEATTLE, WASHINGTON
IN : KING COUNTY
BY : EARLE M. JORGENSEN CO.
FORGE DIVISION

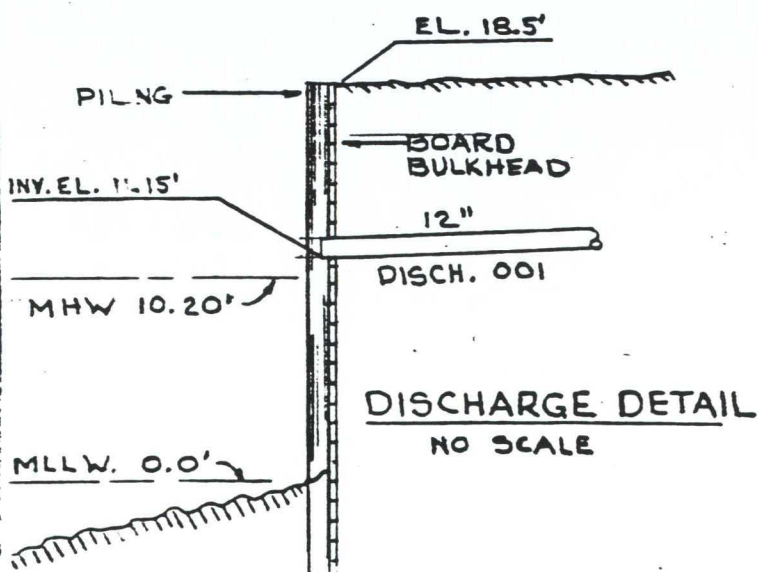
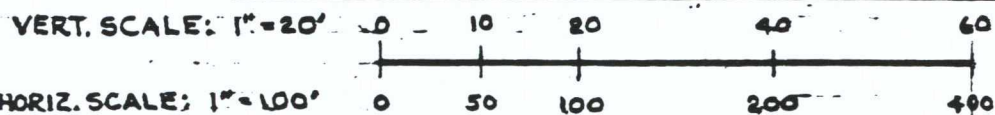
DATE: 1 NOV. 71 REV. DATE:

DRAWING SHEET 1 OF 2

NOV 1 1971



EXTENDED SECTION - DISCHARGE NO. 001



EXISTING DISCHARGE NO. 001

INTO: DUWAMISH RIVER
 AT : SEATTLE, WASHINGTON
 IN : KING COUNTY
 BY : EARLE M. JORGENSEN CO.
 FORGE DIVISION

DATE: 1 NOV. 71 REV. DATE: _____

DRAWING SHEET 2 OF 2